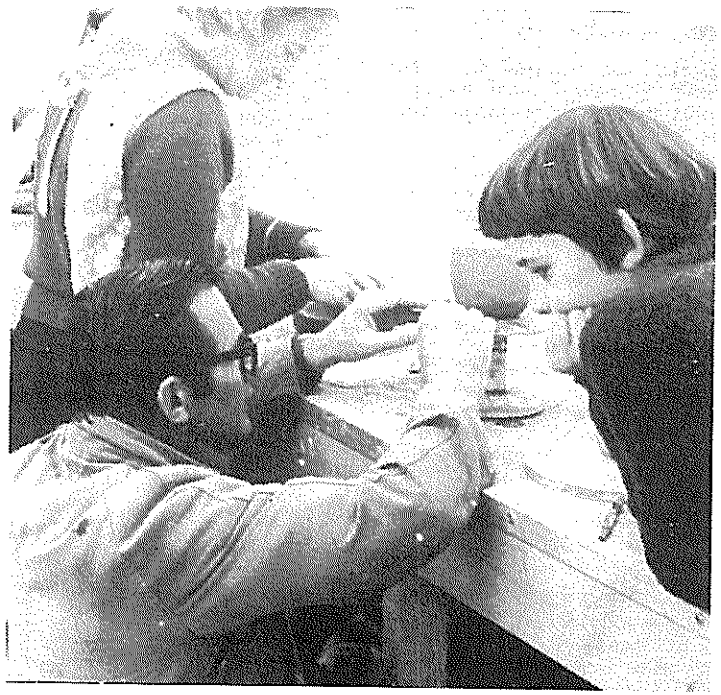
Why a Train?

The Arts Train is based on the concept of doing and not just looking. Its aims are to stimulate an interest and participation in the arts; to promote the formation of active Arts Groups in the countryside; and to offer the people in the country a more interesting use of leisure time.

One may ask "Why a train?" It's the biggest thing on wheels we know, and therefore has a visual impact throughout the countryside, especially as the carriages (of about 1900 vintage) are sheathed in aluminium and illuminated by external fluorescent tubes at night.

Basically it consists of four carriages and a large brake-van which houses a six-cylinder diesel turbo-generator, capable of a three-phase output of 115 amps.

Each carriage is a mobile arts workshop.



A. B. JAMES, GOVERNMENT PRINTER, SOUTH AUSTRALIA

KEEPING TRACK

ISSUED BY AUTHORITY OF THE SOUTH AUSTRALIAN RAILWAYS COMMISSIONEI

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PROJECT PEREGRINE

Periodically revived, is the suggestion to construct a tunnel under the Mount Lofty Ranges to take a railway line direct from Adelaide to Murray Bridge. To be worthwhile, this tunnel would have to be approximately ten (10) miles long diving into the ground somewhere in the vicinity of Mitcham and emerging near Balhannah or Hahndorf. The grade on the present railway via Mount Lofty is 1 in 45 but is equivalent to 1 in 41 allowing for the additional resistance added to trains negotiating curves as sharp as 200 metres radius. With a long tunnel a grade of 1 in 80 or even 1 in 100 is possible and the main advantages would be increased loads for goods trains, faster running times for passenger trains and cheaper operating costs. However, the capital cost of such an undertaking would be quite high and the economic justification difficult to establish.

One of the disadvantages of the "long tunnel" scheme is that commuters between Mitcham and Balhannah (or Hahndorf) would lose their train service unless the existing line was retained. If the existing line was retained it is unlikely that it would be upgraded to provide a modern fast service since the traffic level wou probably be quite small.

Recently a study has been carried o under the direction of the Chief Engine for Railways to establish whether there a viable alternative to the "long tunne scheme. The alternative considered th possibility of a wholly surface line wi tunnelling only to be considered over sho lengths where the cost could be kept lo At this stage, a few words may be sa about the modern view of the heavy grad which exist on the present line.

Back in the "bad old days" when th South line was operated with steam loc motives, the maximum train load was 54 tons and very little could be done improve this. The steam locomotives use were some of the largest in Australi and the axle loads could not be increase At that time any improvements to th grades would have been a blessing. The the diesel electric locomotives were intro duced and it became possible to work number of locomotives coupled togethe and work them with one crew throug the use of "multiple-control". At preser the maximum train load is 1 800 tonne and while the heavy grades are sti undesirable they are not the problem the

once were. One disadvantage is the high fuel consumption to climb the range. If electric traction can be introduced with the use of high horsepower motors and regenerative braking then train speeds on the heavy grades can be increased and "fuel" costs lowered by the regeneration of power on the downhill runs, provided the curves are eliminated. With electric traction, therefore, the desire to reduce the grades becomes very much less.

The study, therefore, took into account that grade reduction was not as important as curve elimination.

A further consideration of the study was the present Government's intention of establishing a new city at Monarto, and it has been the aim of the study that intercity trains between Adelaide and Monarto should be able to complete the journey in 45 minutes!

To achieve these aims some startling standards were set. First of all it was decided that all curves would have to be a minimum of 1 600 metres in radius. This was not wholly achieved but, where it could not be met, the maximum radius possible was fixed on, and this was done only in a few places where destruction of existing housing would have been otherwise necessary. It might be mentioned that these places are confined almost entirely to the section between Adelaide and Belair. Secondly, to achieve the time of 45 minutes, from Adelaide to Monarto, it was found necessary to aim for a maximum speed of 160 km/h (100 m.p.h.) downhill and approximately 100 km/h (62 m.p.h.) uphill. Running at such high speeds as the norm would be a first in Australia although in some parts of the world 100 m.p.h. operation or more has been everyday for about 40 years.

The study has produced two alternative schemes for achieving these aims. The first scheme consists of 27 separate deviations of the existing line each of which is independent and which could be built and used in isolation. The second scheme incorporates 12 of these deviations but in addition has two long sections which deviate, in places, as far as six kilometres from the existing line. In addition scheme 2 incorporates a "short cut" to be built as a by-pass past Murray Bridge but still retaining a line through the Monarto-Murray Bridge area. This would leave the main line near Callington and rejoin the line again at Tailem Bend with a new bridge over the River Murray at this point. The distance saved would be 8 kilometres, and except for a curve at each end would be straight over the whole of its length (42 kilometres). The short cut would be used by trains not required to stop at Monarto or Murray Bridge although in some instances trains would be routed according to which route was quickest (in times of congestion).

Scheme 2 is the more interesting. One of the major deviations in this scheme would leave the existing line near the Eden Hills tunnel (Shepherds Hill Road) and rejoin the line again at Aldgate. The new line would be 6 kilometres shorter than the old and it would be possible to travel at 160 km/h from Heathfield to Eden Hills. As the distance from Eden Hills to Aldgate on the new line would be only 14·2 kilometres the travelling time could be as little as 6 minutes! Alternatively, an express from Aldgate would reach Adelaide in 15 minutes.

The second major deviation would be from Bridgewater to Monarto with a route shortening of 2·5 kilometres. An interesting feature of this deviation is that it would come within 10 kilometres of Strathalbyn and that with the construction of a short branch to the latter the worst parts of the Victor Harbor line would be eliminated. In fact the whole of the existing line between Mount Barker Junction and Strathalbyn could be closed (31·5 kilometres). Express trains from Strathalbyn could reach Adelaide in 43 minutes and it is not difficult to envisage Strathalbyn becoming an outer suburb of Adelaide (or Monarto).

Both schemes envisage pockets of population in the Crafers-Stirling-Bridgewater area, Hahndorf, Mount Barker and Strathalbyn as well as the major conurbations at Adelaide and Monarto and it is considered that services would provide for passengers to join at these locations.

The 45 minute travel time from Monarto to Adelaide would allow for one stop in the Mount Barker area. Each train from Monarto would run into a station with an island platform and simultaneously a train from Strathalbyn would enter the opposite side platform. After an interchange of passengers the Monarto train would proceed express to Adelaide while the Strathalbyn train would stop at all stations. In this way all passengers from Monarto or Strathalbyn could have an express journey from Mount Barker (Strathalbyn passengers change trains) while each could also enjoy the facility of being able to travel to any intermediate station.

But probably the most important outcome of this work (particularly scheme 2) would be a reduction in the running time of express goods trains between Tailem Bend and Adelaide of approximately 1 hour 45 minutes. This would have a dramatic effect on interstate goods trains. The express goods which departs Melbourne at 5.00 p.m. and arrives in Mile End at 8.05 a.m. the next morning would be able to arrive at 6.20 a.m. and enable loading to be placed ready for receival by start work time and still leave a margin for out-of-course running by the train concerned. Furthermore, this train will be able to haul 4 000 tonnes instead of 1 800 tonnes at present, thus providing a first class overnight goods service.

The report on this study has been titled "Project Peregrine" a code name, the aptness of which may remain obscure to those who do not know that the Peregrine Falcon is a fast powerful bird which can reach speeds approaching 100 m.p.h. while diving. The fact that the schemes suggested by Project Peregrine can be built for only half the cost of the "long tunnel" scheme means a saving in the vicinity of $70 million.

IN APPRECIATION

Recently a group of children from the Tea Tree Gully Primary School engaged on a Transport Project were shown over the Adelaide Railway Station.

Twenty-seven letters of appreciation were received from the children and we have found room to reproduce one which is representative of all of them.

"Dear Sir,

Thank you for letting us visit your railway station. It was a pleasure being shown around your beautiful Overland train. It was a very interesting trip especially when we went into the Overland train. I think you are a very lucky person being able to work at such a nice and interesting place. Everyone who went enjoyed it thoroughly. When we got there I was very surprised to see how big it actually was. I hope to be able to visit your railway again sometime.

Yours sincerely,
NICOLA STEVENS,
10 Kennedy Street,
St. Agnes,
Tea Tree Gully, S.A. 5097"

ARTS AND CRAFTS—ON WHEELS

Primarily the purpose of all transport systems is to serve the economy by moving people and goods. Some of the movements are not necessarily of a commercial character, such as people travelling for pleasure—holidaying or visiting. This non-commercial aspect has now been further extended by the Victorian Council of Adult Education which, some time ago hit upon the idea of using an "Arts Train" as a way of taking facilities to country people.

This train consists of four carriages and a large brakevan equipped with a diesel generator, making the whole set completely self-contained except for water supply.

Each carriage is a fully equipped workshop for practical demonstrations, exhibitions and teaching by qualified tutors in such subjects as painting, jewellery making, pottery and photography.

The Arts Train moves from locality to locality according to a schedule well publicised in advance and local people are invited to enrol in classes held twice daily while the train is stabled for two or three days at selected railway stations.

This year the Arts Council of South Australia made arrangements with the South Australian Railways to bring the train into South Australia. Entering from Victoria through the Mount Gambier border on the 15th August, 1975, and starting "work" the following day at Mount Gambier, the train will visit Millicent, Naracoorte and Murray Bridge in the south and then move to country towns north of Adelaide, starting at Tanunda on the 4th September, subsequently moving to Clare, Burra, Peterborough, Gladstone, Wallaroo and Port Pirie. It will then travel for its final season to Bordertown (7th to 11th October) leaving by fast goods train for Melbourne on Monday, 13th October.

The Arts Council expects the train to stimulate an interest and participation in the arts and offer the people in the country a more interesting use of leisure time.